

## **REMARKS**

### **I. General**

This Amendment is in response to the Final Office Action mailed November 30, 2006. Claims 1, 3, 5, 7-15, and 17-26 are pending in the application, and all are rejected by the Office Action mailed November 30, 2006. With this amendment claims 1 and 22 are amended, claims 5 and 23 are cancelled and the remaining claims are unchanged. Reconsideration and withdrawal of the rejections are respectfully requested in view of the following remarks.

### **II. Claim Amendments**

Claims 1 and 22 are amended to include the elements of dependent claims 5 and 23 respectively. Additionally, claim 1 is amended to enhance its readability, and not in response to any art. Entry of these amendments is respectfully requested.

### **III. Claim Rejections**

#### **A. Rejections under 35 U.S.C. §102**

On page 2 of the Office Action claims 15 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Ford, U.S. Patent No. 5,966,234 (hereinafter "Ford"). The Applicant must respectfully disagree.

It is well settled that to anticipate a claim, the reference must teach every element of the claim, see M.P.E.P. §2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim," see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Furthermore, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim," see M.P.E.P. § 2131, citing *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989). The Applicant respectfully asserts that the rejection does not satisfy these requirements.

Claim 15 requires “modulating an input light beam with an electrical signal using optical signal modulation; ...concurrently modulating said electrical signal by interacting with said input light beam using electroabsorption modulation.” The Office Action indicated that these features were disclosed at column 3 lines 46-50 and column 4 lines 5-8 of the Ford reference respectively. However a careful review of the cited portions indicates that the Ford reference does not teach claim 15 in its entirety. Specifically, Ford does not teach or suggest modulating an electrical signal with a light beam. The cited section (col. 4, lines 5-8) discloses “With reference to FIG. 2, there is shown a cross-section of an illustrative Retro-Reflecting Electroabsorption Optical ... modulator device ....” A retro-reflective device is a device that returns light to the point where it originates regardless of the angle of incidence and Ford does not teach or suggest that the device modulates an electrical signal. Therefore, there is no disclosure in the cited section of modulating the electrical signal. Thus, it is respectfully submitted that the Ford reference does not anticipate independent claim 15. Further, dependent claim 18 depends from claim 15 and includes the limitations of the independent claim. At least for the reasons discussed above claim 18 is believed allowable as well. Reconsideration and withdrawal of the rejection are respectfully requested.

#### **B. Rejections under 35 U.S.C. §103**

On page 3 of the Office Action, claims 1,3,5,7-11, 13 and 22-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ford et al., U.S. Patent No. 5,966,234 in view of Yamada, U.S. Patent No. 6,330,089 (hereinafter “Yamada”). The Applicant must respectfully disagree.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the references’ teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Applicant asserts that the rejection does not satisfy the basic criteria.

In the rejection of independent claim 1 the Office Action asserts that Ford discloses all elements of claim 1 with the exception of the optical circulator. The Office Action asserts

that this feature is disclosed by Yamada. The Office Action rejected independent claim 22 for similar reasons. However, as the Applicant has amended claims 1 and 22 to include limitations from dependent claims 5 and 23, the below argument will pertain to the rejections based on those claims.

The Office Action rejects dependent claims 5 and 23 for similar reasons as independent claims 1 and 22. The elements of claims 5 and 23 have been incorporated into independent claims 1 and 22. Additionally, the Office Action asserts that the feature of “said input light beam is operable to interact to modulate said electrical signal” is disclosed at column 4 lines 2-27 of the Ford reference. The cited section does not disclose this feature of the claims. The cited section discloses modulating the absorption of the light signal by regulating the voltage. It does not mention anywhere that the light signal modulates an electrical signal. The Yamada reference does not appear to teach or suggest this limitation either. Therefore, the combination of Ford and Yamada does not teach, suggest or disclose the features of independent claims 1 and 22, as amended. Thus, claims 1 and 22 are believed allowable. Further, dependent claims 3, 7-11, 13, and 24 are believed allowable as well, at least, by virtue of their dependency either directly or indirectly from allowable independent claims. Reconsideration and withdrawal of the rejection are respectfully requested.

On page 8 of the Office Action claims 12 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ford in view of Yamada in further view of Lembo et al., U.S. Patent No. 5,402,259 (hereinafter “Lembo”). The Applicant must respectfully disagree.

Claims 12 and 14 depend, either directly or indirectly, from independent claim 1, as amended. As discussed above, neither Ford nor Yamada teach or suggest the elements of claim 1 in its entirety. The Lembo reference does not correct the deficiencies of the Ford and Yamada references as applied to independent claim 1. Therefore, dependent claims 12 and 14 are believed allowable as well. Reconsideration and withdrawal of the rejection are respectfully requested.

On page 9 of the Office Action claims 17, 19-21 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ford in view of Lembo. The Applicant must respectfully disagree.

Claims 17, 19-21 and 26 depend, either directly or indirectly, from independent claim 15. As discussed above with reference to the §102 rejections the Ford reference does not teach or suggest the limitations of independent claim 15 in its entirety. The Lembo reference does not correct the deficiencies of the Ford reference as applied to claim 15. Therefore, dependent claims 17, 19-21 and 26 are believed allowable as well. Reconsideration and withdrawal of the rejection are respectfully requested.

On page 10 of the Office Action claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ford. However, a review of the rejection indicates that the rejection appears to apply Ford in view of Yamada in further view of Official Notice. The Applicant must respectfully disagree.

Claim 25 depends from independent claim 15, and therefore inherits the limitations of claim 15. As discussed above with reference to the §102 rejections the Ford reference does not teach or suggest the limitations of independent claim 15 in its entirety. Therefore, at least for the reasons discussed above with regards to claim 15, claim 25 is believed allowable. Additionally, the Office Action's rejection appears to indicate that independent claim 15 was rejected in view of Yamada. However, the Office Action does not present a rejection of claim 15 in view of Yamada. As discussed above the combination of Ford in view of Yamada does not teach or suggest the modulation of the electrical signal, concurrently or otherwise, with the light beam. Therefore, claim 25 is believed allowable. The Official Notice does not correct these deficiencies.

In taking Official Notice, the Office Action merely states that "the office interprets a telecommunications system to include electrical devices that are optically connected, but not electrically connected." Applicant respectfully requests the Examiner to clarify the above recited statement. It appears that the statement excludes all electrical connections. However, in a given system, electrical components are generally connected to other electrical components whether or not they include optical connections. Thus, it is unclear to which specific components the Office Action refers. While Applicant has traversed the contents of the Official Notice, Applicant further respectfully requests that the Examiner provide an affidavit or publication supporting such Notice under M.P.E.P. § 2144.03(C) if the Examiner believes such features are well-known.

Claim 25 is believed allowable at least because of its dependence from claim 15, further, it is believed that claim 25 is allowable because the cited combination is without proper motivation. The Office Action asserts as the motivation to combine the references that “it would be obvious to one of ordinary skill in the art ... to modify the teachings of Ford et al in view of Yamada ... in order to provide a long distance telecommunications device.” In other words, the Office Action merely states the result as the motivation to achieve the result. This is circular in nature, stating that it is obvious to make the modification because it is obvious to achieve the result. Such language is merely a statement that the reference can be modified, and does not state any desirability for making the modification. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990), as cited in M.P.E.P. §2143.01, emphasis original. Therefore, the motivation provided in the Office Action is improper, as the motivation must provide the desirability for making the modification. Reconsideration and withdrawal of the rejection are respectfully requested.

#### **IV. Conclusion**

In view of the above, Applicant believes the pending application is in condition for allowance. Reconsideration and allowance of the pending claims is respectfully requested.

Applicant believes no fee is due with this response. The fee required for the Request for Extension of Time is dealt with in the accompanying transmittal. If any additional fees are due, please charge Deposit Account No. 50-1078, under Order No. 10040010-1 from which the undersigned is authorized to draw.


I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV482740545US, in an envelope addressed to: MS RCE, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Date of Deposit: March 30, 2007

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Respectfully submitted,

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